

**EMPTY BATTLEFIELD XXI:  
REVOLUTIONARY TACTICS FOR THE  
FORCE XXI LIGHT INFANTRY UNIT**

**A MONOGRAPH  
BY  
Major Thomas D. Webb  
Infantry**



19970506 036

**School of Advanced Military Studies  
United States Army Command and General Staff  
College  
Fort Leavenworth, Kansas**

**First Term AY 96-97**

Approved for Public Release Distribution is Unlimited

**DTIC QUALITY INSPECTED 3**

# REPORT DOCUMENTATION PAGE

Form Approved  
OMB No. 0704-0188

Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503.

1. AGENCY USE ONLY (Leave blank)		2. REPORT DATE	3. REPORT TYPE AND DATES COVERED MONOGRAPH	
4. TITLE AND SUBTITLE EMPTY BATTLEFIELD XXI: REVOLUTIONARY TACTICS FOR THE FORCE XXI LIGHT INFANTRY UNIT			5. FUNDING NUMBERS	
6. AUTHOR(S) MAJOR THOMAS D. WEBB				
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) School of Advanced Military Studies Command and General Staff College Fort Leavenworth, Kansas 66027			8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES) Command and General Staff College Fort Leavenworth, Kansas 66027			10. SPONSORING/MONITORING AGENCY REPORT NUMBER	
11. SUPPLEMENTARY NOTES				
12a. DISTRIBUTION / AVAILABILITY STATEMENT  APPROVED FOR PUBLIC RELEASE. DISTRIBUTION UNLIMITED.			12b. DISTRIBUTION CODE	
13. ABSTRACT (Maximum 200 words)  SEE ATTACHED				
14. SUBJECT TERMS			15. NUMBER OF PAGES	
			16. PRICE CODE	
17. SECURITY CLASSIFICATION OF REPORT UNCLASSIFIED	18. SECURITY CLASSIFICATION OF THIS PAGE UNCLASSIFIED	19. SECURITY CLASSIFICATION OF ABSTRACT UNCLASSIFIED	20. LIMITATION OF ABSTRACT UNLIMITED	

## **Abstract**

**EMPTY BATTLEFIELD XXI: REVOLUTIONARY TACTICS FOR THE FORCE XXI LIGHT INFANTRY UNIT** by MAJ Thomas D. Webb, USA, 58 pages.

Commander's have perennially used light infantry forces during the initial stages of strategic, operational, and tactical scenarios to quickly insert a credible combat force into the applicable area of operations. With the growing complexity of the threat spectrum, it is difficult for these units to maintain proficiency in the multitude of environments in which they may operate. The purpose of this dictum is to propose an organizational structure and doctrinally based tactics for the Force XXI Light Infantry unit. It is the author's contention that Light Infantry units, exploiting the advantages of highly dispersed formations, will emerge as an effective and lethal force of the XXIst Century. Following several simple concepts that have been discussed and analyzed in the last 100 years, these forces will become the 'flagships' of the US Army. They will emerge as the critical arm in mid and high intensity, armored conflicts. In addition, they will retain their ability to operate skillfully in lower intensity conflicts and operations other than war.

SCHOOL OF ADVANCED MILITARY STUDIES

MONOGRAPH APPROVAL

Major Thomas D. Webb

Title of Monograph: *Empty Battlefield XXI: Revolutionary Tactics  
for the Force XXI Light Infantry Unit*

Approved by:



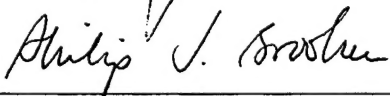
LTC Mastin M. Robeson, USMC

Monograph Director



COL Danny M. Davis, MA, MMAS

Director, School of  
Advanced Military  
Studies



Philip J. Brookes, Ph.D.

Director, Graduate  
Degree Program

Accepted this 20th Day of December 1996

**Empty Battlefield XXI: Revolutionary Tactics for the Force XXI Light  
Infantry Unit**

**A Monograph  
by  
Major Thomas D. Webb  
Infantry**

**School of Advanced Military Studies  
United States Army Command and General Staff College  
Fort Leavenworth, Kansas**

**First Term**

**Approved for Public Release; Distribution is Unlimited**

## **Abstract**

**EMPTY BATTLEFIELD XXI: REVOLUTIONARY TACTICS FOR THE FORCE XXI LIGHT INFANTRY UNIT** by MAJ Thomas D. Webb, USA, 58 pages.

Commander's have perennially used light infantry forces during the initial stages of strategic, operational, and tactical scenarios to quickly insert a credible combat force into the applicable area of operations. With the growing complexity of the threat spectrum, it is difficult for these units to maintain proficiency in the multitude of environments in which they may operate. The purpose of this dictum is to propose an organizational structure and doctrinally based tactics for the Force XXI Light Infantry unit. It is the author's contention that Light Infantry units, exploiting the advantages of highly dispersed formations, will emerge as an effective and lethal force of the XXIst Century. Following several simple concepts that have been discussed and analyzed in the last 100 years, these forces will become the 'flagships' of the US Army. They will emerge as the critical arm in mid and high intensity, armored conflicts. In addition, they will retain their ability to operate skillfully in lower intensity conflicts and operations other than war.

## **Table of Contents**

I. Introduction	2
II. Evolution of the Empty Battlefield	6
III. Current Light Infantry Organization	16
IV. Force XXI Operations	22
V. Empty Battlefield XXI - Force XXI Light Infantry Tactics for War, Combat, and Peacetime Operations	26
VI. Case Studies: 9th Infantry Division HTTPB and Marine Combat Action Platoons	38
VII. Analysis	43
VIII. Conclusion	45
Appendix 1: Endnotes	47
Appendix 2: Bibliography	54

## SECTION I: Introduction

**“Fools say they learn by experience; I prefer to learn by other people’s experience.’ That experience, far wider than any of us can hope to acquire for ourselves, is contained in history. It is ours for the finding, if we only look for it thoroughly enough. We need to see clearly and remember the real lessons of the last war, but we can only achieve this if we have a good background.”<sup>1</sup>**

The following dictum is a compilation of influences currently affecting the Armed Forces, the US Army, and the Infantry Corps. These influences cover the spectrum from technological advancements to political objectives to the changing global community. Technologically, new munitions, weapons systems, and communication devices have drastically changed the manner in which armed forces fight. Making the battlefield extremely more lethal, these innovations enable fighting forces to accomplish tasks that were unheard of years ago.

Politically, the US has adopted new priorities with respect to programs and institutions that the federal government wants to sponsor. In the midst of attempts to balance the federal deficit, the portion of the federal budget apportioned to the military has gradually decreased for 1989 to the present.<sup>2</sup>

Globally, the US has deployed numerous times for operations other than war since the conclusion of Desert Storm in 1991. A new world order, which grew out of events like the collapse of the former Soviet Union, created a new kind of unrest in the world characterized by numerous ‘hot spots’ worldwide. This changing framework is caused by several various factors including a shift in the balance of power, nationalism replacing communism, a rejection of Western political and cultural values, and competition for power.<sup>3</sup>



By combining all of these factors into an intangible algorithm, the result is the current predicament in which the Army finds itself. In his recent White Paper, *Force of Decision*, Chief of Staff of the Army, General Dennis Reimer highlighted that "from 1990 until the present, the defense budget has decreased 38%, the force has been reduced 35%, and worldwide missions have increased 300%."<sup>4</sup> Furthermore, in 1995, "on any given day. . . the Army averaged 20,000 soldiers deployed in over 80 countries."<sup>5</sup> The Threat Spectrum has significantly increased the types of adversaries the US may oppose. These forces may include phenomenological threats, non-nation forces, infantry based organizations, armor-mechanized based armies and/or complex adaptive armies. The most serious threat is the impact of proliferation of weapons of mass destruction added to any of these situations.<sup>6</sup>

To contend with these new challenges, FM 100-5 contains a myriad of tasks that US soldiers must be able to complete. The Army must be proficient in these missions in order to "achieve its strategic objectives in three diverse environments"<sup>7</sup>: war, conflict, and peacetime. Examples of these missions, classified as combat and non-combat, include 14 types of activities.<sup>8</sup>

In order to maintain their proficiency in conducting these types of operations, light infantry battalions will need to modify existing tactics to succeed on the future battlefield. Though several Force XXI systems and munitions are still only concepts, many of them are already fielded in light infantry units across the Army. Both active duty and reserve units possess a myriad of 'Own the Night' devices, to include night vision devices and global positioning systems. Several of the battle command systems are already in use to include Maneuver Control Station Phoenix (MCS-P), All Source Analysis System (ASAS), and the Advanced Field Artillery Tactical Data System (AFATDS).<sup>9</sup> Several

other Force XXI initiatives, such as the Infantry Soldier System and the Crusader Field Artillery Gun System, are under development at various Army Research and Development Centers (ARDCs). With the year 2010 marking the inception of Force XXI, the light infantry battalion has less than 15 years to develop tactics and procedures to ensure its success on a battlefield that will undoubtedly be rapid, decisive, and lethal. Michael Howard, a noted military writer who received the Chesney Memorial Gold Medal in 1973, once said that "They [the Army] should see themselves as intelligent surf riders spotting the essential currents on which to ride in a sea which is certainly disturbed and by no means friendly but on which, if they are skillful enough, they will survive."<sup>10</sup> He is implying that the Army must change to adapt to an evolving world order.

In this dictum, the writer intends to prove that the light infantry battalion's survival on the future battlefield will depend on its ability to adapt its tactics to meet the changing world around it. The writer will propose common operations and tactics that the unit can use in all levels of operations: war, combat, and peace. More specifically, these changes will impact on offensive, defensive, low intensity, and humanitarian type operations. The hypothesis of the argument is that light infantry battalions need to adapt to significantly dispersed dispositions. Such dispositions must be the norm rather than the exception. These units should be as comfortable operating in this manner, in all types of environments, as they are qualifying with their individual weapons on a marksmanship range.

The writer will refer to these new tactics as Empty Battlefield XXI throughout the paper. Whereas the 'empty battlefield' is associated with unfavorable tactics, Empty Battlefield XXI will be the mechanism light infantry battalions will use to ensure their

prominence on any future battlefield. Though initially it will appear as a radical concept, Empty Battlefield XXI is simply a continuation of the evolution of infantry tactics ignited by Force XXI initiatives and capabilities. These new tactics will better enable the commander to practice battle command and position the force to achieve success on the changing future battlefield. The author will use the following methodology to demonstrate why light infantry should change and describe feasible tactics, techniques, and procedures.

- a. An analysis of the history of light infantry tactics will demonstrate to the reader that Empty Battlefield XXI is the next logical progression in its tactical evolution.
- b. An analysis of current light infantry organization and tactics will provide the reader with a perspective on current battlefield disposition.
- c. An overview of Force XXI initiatives and concepts will demonstrate that light infantry is ready to take the next step. This overview will provide the foundation for proposed tactical and organizational changes.
- d. A review of specified units and operations demonstrates that Empty Battlefield XXI concepts have been used successfully in the past. Specific operations and units will include the 9th Infantry Division and the Marine Combat Action Platoon Program.

## SECTION II: Evolution of the Empty Battlefield

The title of this chapter is derived from a phenomena used to describe the evolution of infantry tactics from ancient times to the present. The Empty Battlefield describes a condition in which the density of soldiers to terrain has gradually decreased during the 20th century. Many theorists claim that this evolution has negative implications. They suggest that dispersion was simply a reaction to improved weapons systems and that its desired effect was to increase the survivability of the individual soldier. However, in some instances, the emptiness of the battlefield was a deliberate action in order to increase the lethality and effectiveness of light infantry forces. Ensuing discussions on skirmish operations demonstrate that battlefield extension was for more than just survivability. Tacticians discovered that skirmish operations provided surprise, deception, and maneuver advantages. For the purposes of this monograph, the term "passive extension" will imply a reaction (i.e. dispersing to avoid by enemy weapons systems) and the term "active extension" will imply an initiative based on friendly capabilities (i.e. dispersing because night vision devices increase leader command and control capabilities).

Though most theorists believe this phenomena began with the invention of the rifled musket, the empty battlefield can actually be traced to the very inception of infantry as a formal unit. Hart provides a good starting point for the analysis of infantry evolution in *The Future of the Infantry*. He begins by claiming that the phalanx marked the introduction of legitimate infantry tactics.<sup>11</sup> Webster describes the phalanx as a formation of infantrymen carrying overlapping shields and long spears. To counter the effects of the phalanx, circa. 400 B.C., Epaminondas invented and Alexander the Great perfected the oblique order. The oblique order used the power of the phalanx in concert with a mobile

cavalry detachment in order to fix and maneuver against the enemy. Introduction of the 20 foot sarissa, or pike, enabled the user to “hit while himself out of range.”<sup>12</sup> The introduction of the pike is significant because it was an evolution in weaponry. The introduction of the pike also represents the beginning of the movement towards the empty battlefield.

The infantry experienced other changes over the next several decades in an effort to gain the decisive advantage. The Romans adeptly used the legion from the 1st through the 3rd centuries A.D. In 378 A.D., the legion, for centuries the standard in infantry formations, met its demise at the hands of mounted Goths. Mounted mobility, demonstrated by the Mongols in the 13th Century, evolved as the dominant form of warfare and the ideology of infantry. With a mounted capability, the Mongols improved infantry tactics by demonstrating the ability to “hit without being hit.”<sup>13</sup>

Military tacticians continually searched for ways to improve the efficiency and effectiveness of infantry formations. In the 17th Century, Frederick the Great combined many technological, behavioral, and tactical innovations in order to achieve his successes and fame. Frederick capitalized on the advantage of the socket bayonet and musketeers. With this innovation, he essentially had a pikeman and a shooter in the same soldier. He also used disciplined training in order to maximize the firepower of his formations, capable of “firing five volleys a minute with the flintlock muzzle loader.”<sup>14</sup> To further exploit the potential of his infantry, Frederick introduced the skirmisher to the battlefield.

The skirmisher, as the Pikemen did centuries before, extended the battlefield again. Originally adopted for protective duties and for opening the battle, the skirmisher experienced difficulty proving his utility before 19th century warfare. Viewed as a

supporting asset, he was not the dominant fighter on the battlefield. Nevertheless, Marshall de Saxe added a corps of light infantry to his Army in Flanders, using them to produce the point "that opened the way for attacking columns".<sup>15</sup> By 1808, other European armies realized the value of skirmishers and dedicated as much as a division to skirmishing duties. By this time, the Prussian Army was using as much as one third of its infantry in a skirmishing role.<sup>16</sup> The abundance of skirmishers in the European armies was partially ignited by the success of American skirmishers during the American Revolution. Both the French and the British made concerted efforts after the war to develop skirmishing units.<sup>17</sup>

Unfortunately, concurrent with the advancement of skirmishers came the technological advances in the artillery. A dichotomy arose as to how best to prepare the enemy for the main body attack: with artillery or with skirmishers (light infantry). Most leaders chose artillery because of its visible destruction: "At times, as many as 100 guns would concentrate in order to prepare [shape] enemy formations. . . Many of the biggest battles were to a very considerable extent 'artillery battles'."<sup>18</sup>

Due to the technological and destructive nature of artillery, it received more attention than the infantry in terms of emerging employment and tactics. "The infantry was generally thought to require the least technical training of any arm and was not felt to be susceptible to radical development."<sup>19</sup> Adamant believers in the forte of skirmishing persisted in their efforts to continue the study of skirmish operations. Analyzing the success of the skirmishing operations in the past, they sought to develop an "infantry science".<sup>20</sup>

Sir John Moore of England was one leader during the American Revolutionary War who strongly advocated the use of skirmish tactics. He formed his soldiers into a light infantry arm to fight against Napoleon during the Peninsular Campaign, circa. 1807-1814.<sup>21</sup> "He stressed not only the importance of firepower and dispersed formation, but also the need for a more humane discipline which would give free rein to the personal characteristics of each soldier."<sup>22</sup>

In the late 1830s, France began the formation of Chasseurs, a unit of infantry soldiers that were able to jog as well as shoot. One of the pillars of strength of the Chasseurs was the encouragement to develop each individual's initiative and education. Developing the soldier's individuality would enable them to exercise personal initiative on the battlefield. By 1853, the French Army possessed approximately twenty battalions of Chasseurs. However, the Chasseur concept was short lived due to a resistance to change among many senior ranking French officers. Senior officers in the French Army, like Colonel Bugeaud, lobbied against the formation of Chasseurs. They were upset that the Chasseurs were absorbing so many young officers who, in their opinions, would have made exceptional generals if they remained on the conventional route.<sup>23</sup>

In addition to bleeding conventional forces of potential talent, the adversaries also believed that the Chasseur concept usurped the authority of the officer corps. By exercising personal initiative and decision making in battle, Chasseur soldiers were no longer under the control of their officers. The officer corps believed they had to be the proponent for every decision. In their opinion, empowering the Chasseur to demonstrate personal initiative constituted the devolution of decision making.<sup>24</sup>

From the phalanx to the skirmisher, most reasons for extending battlefield dispersion were positive ones. Tacticians recognized a 'positive' advantage in the maneuver and fires of the skirmishers (light infantry). The demise of the Chasseurs initiated the passive influences for extension of the battlefield. Infantry units began to extend their formations in an effort to reduce the effects of enemy munitions and weapons.

Dr. James Schneider, in his "Theory of the Empty Battlefield", identifies four reasons impacting on the extension of the battlefield. None of the reasons were to exploit the inherent power possessed by the former skirmishers. Schneider's extension amounted to passive forms of security. Subsequently, the true value of the skirmishers, or light infantry, was lost.<sup>25</sup> The four examples that Schneider uses were the rifled musket, the breech loading rifle, the magazine, and smokeless powder. He provides convincing statistics to demonstrate the passive influence contributing to the extension of the battlefield. These innovations overlapped with the proactive measures to extend the battlefield, i.e. those measures intended to exploit the inherent power of light infantry.

The first extension of the battlefield was a function of the rifled musket. Introduced around 1500, the weapon was generally limited to use for hunters. Continual upgrades in the system resulted in the inception of the Minie Ball in 1849. This evolution greatly enhanced accuracy and range: "beyond 400 paces the smoothbore was completely useless, while the rifle hit larger targets, like troop formations, at 800 yards."<sup>26</sup>

The invention of the breech loading rifle in 1812 marked the second significant action which would extend the battlefield. With the breechloader, the riflemen could fire and reload his weapon from the prone position, significantly decreasing his signature to the enemy. In 1849, American forces introduced the magazine to the battlefield. The



combination of the breechloading rifle and the magazine increased unit battlefield frontages. Schneider explains that frontage is a function of rates of fire. To support this hypothesis, he cites studies demonstrating the effects of increased rates of fire on dense targets.<sup>27</sup> However, he fails to stress the converse of this argument, the fact that increased range, accuracy and rates of fire would enable the infantry formation to disperse, thus covering more area while increasing elusiveness.

Smokeless powder was the final factor contributing to the empty battlefield phenomena. Because smokeless powder did not leave a prominent signature, attacking forces could not determine the locations of enemy firers. This condition led to the perception of attacking an invisible foe. Unable to return fire against an enemy they could not identify, infantry forces dispersed in order to reduce the size of the target they offered to their opposition.<sup>28</sup>

The cumulative result of these innovations had tangible affects on the dispersion of the battlefield. Though he does not specify the size of the unit, Schneider states that from 1750 to 1905, unit frontages increased from 9.69 kilometers to 34.5 kilometers. Troop density on this same frontage decreased from 8.41 soldiers per meter to 3.27 soldiers.<sup>29</sup> Schneider's concluding argument sounds similar to Colonel Begeaud's in his attempts to eliminate the Chasseurs. He states that the purpose "of tactical formations is to maintain control for purposes of achieving fire direction and superiority against an enemy force."<sup>30</sup> He does not mention that the empty battlefield was as much a function of active reasons as it was of passive reasons. He claims that dispersion of the battlefield was caused by the individual soldier's desire to negate the four innovations and that it diluted the 'power' of more concentrated formations.<sup>31</sup>

Unfortunately, the passive dispersion of the battlefield would remain with the Army throughout the twentieth century. It is strange how blind mankind can be, even though the positive power of dispersed formations was demonstrated on many occasions in the face of these innovations. One such example is provided by the Japanese during the Russo-Japanese War of 1904-1905.

"In certain respects the startling, sudden onslaught of Okasaki's brigade resembled a dervish rush, but one marked with difference in as much as the formation was not solid but exceedingly flexible and loose offering no very valuable target even to a machine gun. The speed was marvelous and the men got across the plain more like charging cavalry than ordinary infantry."<sup>32</sup>

The combined effect of these influences, active and passive expansion and improved weapons systems, resulted in infantry trench warfare during World War I. B. H. Liddell Hart made an attempt at active dispersion in advocating the indirect approach after studying World War I battles. However, the predominant approach for most armies during World War I was characterized by mass attrition. The predominant approach during World War II was to mass forces at one point in order to rupture enemy forces. Examples of this thought process include German's campaign against Russia on the eastern front during World War II, the Battle of the Bulge, and the Allied invasion and breakout at Normandy.

The next time tacticians addressed dispersion with respect to the empty battlefield was in the 1950s during the Pentomic Era. American forces, at the time fighting in Korea, dispersed both laterally and in depth in order to minimize any effects of nuclear munitions. Dispersion became the alternative to burrowing in the earth in response to a nuclear strike, subsequently eliminating a target worthy of nuclear munitions. Once again, ideas were

passive in nature as they sought to reduce the effects of improved munitions rather than to exploit the strength of light infantry.

"We see no lines of entrenchment, no masses waiting in reserve, no roads jammed with trucks moving to the front. In fact, we see no front only a battle area. Within the battle area to a depth of 100 miles or more, we see small mobile units deployed at intervals measured in miles instead of yards."<sup>33</sup>

The concept did have merit, but it was conceived in a passive manner. Like Schneider's previous arguments, the munitions, rather than the qualities of the infantryman, were the focal point for devising tactics. In the midst of the nuclear age, the power of nuclear munitions shaped military forces and drove military tactics and doctrine. Leaders demonstrated a greater faith in the potential of technology than in their soldiers. "The American approach to war had long favored the substitution of technology for manpower as a method of achieving military success - with fewer casualties."<sup>34</sup> However, there were still a few leaders who professed their belief in the power of the infantryman.

Even at that time, there existed a glimmer of hope for resurrecting continued study and development of light infantry tactics. Chief of Staff General Matthew Ridgway believed that "the nation's foremost need was for an immediately available joint military force of mobile character in which the versatility of the whole is emphasized and the preponderance of any part is decentralized."<sup>35</sup> However, the Army chose not to act on Ridgway's suggestion and the nation entered the era of the Cold War. Tactics and the ideas of the Pentomic Era were put on the back burner until America's next conflict, Vietnam.

The United States learned many lessons in Vietnam, though the most significant impact of the war may have occurred in 1984. General John Wickham announced the introduction of the light infantry division in his 1984 White Paper. He stated that the

inherent power of the soldier made the light infantry a unique organization. He claimed that the value of the division stemmed from its unique composition. One of the original intents for the division was to reinforce forward deployed US forces in a European or an Asian conflict.<sup>36</sup> To accomplish this mission, they adopted characteristics similar to those of their predecessors, the skirmishers. Wickham's description of light infantry divisions sounded comparable to accounts of skirmish organizations.

"offensively oriented units. Especially in low intensity conflict, they will be able to seek out and destroy the enemy on his terrain using initiative, stealth, and surprise. Attacks by infiltration, air assault, ambush and raid will be the norm. Light infantry divisions will be "terrain using" forces expert in camouflage, skilled in countermobility technique, and quick to seize advantages afforded by their tough and spirited soldiers."<sup>37</sup>

Wickham continued this narration by stating that "even on defensive missions in close terrain or built-up areas, light infantry forces will habitually ambush, attack, and counterattack."<sup>38</sup>

Wickham claimed that the strength of light infantry came from "the synergistic combination of concerned, competent leaders and well-trained soldiers".<sup>39</sup> He eluded to future initiatives when indicating that these units used "high technology. . . to enhance command and control, firepower, navigation and night vision and air and ground mobility."<sup>40</sup> Much of this new technology would eventually come from the Army's experimental high technology test bed unit, the Ninth Infantry Division. Other theorists agreed with Wickham's assessment of light infantry potential but did not think he understood their unique characteristics.

In his book *Light Division in Europe: Forces of the Future*, David Gates made the assertion that the adjective 'light' was not indicative of the way these forces would fight. Gates pointed out several inadequacies of the light division in their 1984 form. With a

troop strength at 543, he did not believe they had enough supporting weapons to pose a formidable force in a high intensity environment. He also noted that they lacked engineer support and that they relied too heavily on theater assets to provide support requirements.<sup>41</sup>

Gates also questioned the issue of mobility for these forces, suggesting that the 'light' in light infantry was a function of the 500 C141s required to transport them.<sup>42</sup> Gates asserts that light should imply the manner in which these forces fight, claiming that "forces which were primarily destined for petite guerre operations are thus in danger of being assigned to missions for which they are ill-suited - notably the static defense of the FEBA."<sup>43</sup> To understand the potential of light infantry units, military leaders must understand the 'light' concept.

Today's light infantry units should adopt the persona of Jager units, German infantry units that employed 'light' tactics. Gates' description of Jager units sounds a lot like Wickham's vision of US light infantry units.

True Jager stalk their opponents in a fluid fight. Seizing any advantage which the environment offers, they fire, hide, attach or vanish, guided by their instincts or professional training and by the dictates of self preservation. They seek to disconcert, disrupt, receive and delay the enemy, rather than to defeat him and they endeavor to deny him the use of specific pieces of terrain, rather than to defend them staunchly in the manner of regular infantry."<sup>44</sup>

Traditional Jager units used light tactics and maintained a light structure requiring few additional resources. "They prefer to fight mercurial engagements relying on elusiveness, stealth, surprise, dispersion, swift, judicious maneuvers and discriminating applications of firepower. In an ambush against mechanized forces, for example, they would seek to ambush the opposition, firing on their flanks and rear areas to find weak points in armored formations."<sup>45</sup> In high intensity environments, "they could conduct hit and run raids and

ambushes, infiltration and stay behind missions aimed at disruption or enemy command and control, resupply or reinforcement arrangements or the seizure of key terrain in his rear.”<sup>46</sup> Modern units should not use size to quantify their title. ‘Light’ should apply to the tactics they use to fight.

### **SECTION III: Current Light Infantry Organization**

#### **Principles of War**

In order to devise Empty Battlefield XXI light infantry tactics, one must be familiar with current tactics, techniques, and procedures. Pertinent to any discussion on tactics are the Principles of War. The purpose of the principles, originally adopted in 1921, is to “provide general guidance for war at the strategic, operational, and tactical level.”<sup>47</sup> These principles are the overriding considerations for the employment of any military force and are inherent in the planning phase of any operation. Whereas all of these principles are important to the development of new tactics, three in particular stand out as paramount to Force XXI operations. They are maneuver, surprise, and objective. Emphasis on these principles does not diminish the importance of the remaining six. All the principles impact on development of new tactics for Empty Battlefield XXI. However, these three will constitute the following portion of this dictum because they impact most significantly on the tactical evolution. They will be ‘organic’ to proposed future tactics. A critical analysis of the definitions and descriptions of the highlighted principles will facilitate a discussion of evolutionary tactics. In describing the principles, FM 100-5 provides the reader with a definition (*italics*) and a description.

**Maneuver** - *place the enemy in a position of disadvantage through the flexible application of combat power.*<sup>48</sup> Though the definition refers to combat power, the first

sentence of the description indicates that maneuver is the movement of forces - “maneuver is the movement of forces in relation to the enemy to gain positional advantage.”<sup>49</sup> The passage continues stating that maneuver “keeps the enemy off balance and protects the force”.<sup>50</sup> The definition of maneuver and the description of the term could be misleading for the reader. Clearly, the definition applies to the application of combat power and the ability to apply that combat power at the force’s discretion. However, the description tends to influence the reader to interpret combat power as the physical disposition of forces on the battlefield. This phenomena is an implied derivative of old tactics and weapons systems. With an older model rifle or artillery piece, the force must be relatively close to the objective area in order to apply the affects of the weapons systems. Given newer systems, the reader can interpret the italicized definition of maneuver more literally: “the flexible application of combat power”.<sup>51</sup>

The definition also uses the following phrases: “poses new problems for the enemy”, “at all levels of war”, and “maneuver is dynamic warfare that rejects predictable patterns”. Today’s warfighter needs to concentrate on these passages. He should not become fixated on the movement of forces. This fixation will constrain the development of tactics that optimize the potential strength of light infantry.

**Surprise** - *Strike the enemy at a time or in a manner for which he is unprepared.*<sup>52</sup>

The quarterback took the hike and lateraled to the tailback. He ran towards the sideline and stopped short of the line of scrimmage in order to throw a pass to the wide receiver who was standing alone in the end zone. The receiver caught the ball and his team scored six points enroute to a victory. The opposing team was surprised. The running back had been gaining 3 to 5 yards per rush prior to this play. As a result, during half-time, the

opposing team emphasized the importance of stopping their opponent's ability to run. By over focusing on the run, the opposing team had played right into the hands of its more versatile opponent. The conditions had been established for a successful half-back option play.

FM 100-5, *Operations*, states that "factors contributing to surprise include speed, effective intelligence, deception, application of unexpected combat power, operations security (OPSEC), and variations in tactics and methods of operations. Surprise can be in tempo, size of force, direction or location of main effort, and timing."<sup>53</sup> The definition of the term seems to limit its potential application in light of a Force XXI battlefield. The user should seek to employ surprise in operations in order to deceive the opposition as to his true intentions. Surprise, for planning purpose, is covered under the auspices of deception in the decision making process. It is only one of a number of parts that make an operation. A separate operation developed to conceal a commander's true intentions, it must be planned, prepared, and executed. To achieve success on the Force XXI Battlefield, surprise will be inherent in every operation using Empty Battlefield XXI light infantry tactics.

**Objective:** *Direct every military operation toward a clearly defined, decisive, and attainable objective.*<sup>54</sup> The description states that the "ultimate military purpose of war is the destruction of the enemy's armed forces and will to fight."<sup>55</sup> If not interpreted correctly, these statements could easily be viewed as contradictory instead of complimentary. The ultimate purpose of war is not always the destruction of the enemy's armed forces. For instance, during counterinsurgent operations, the desired goal is to repress the efforts of the insurgent so that the established government can regain its



credibility. The passage supports this theory by stating that "ultimate objectives other than war might be more difficult to define."<sup>56</sup> Such ambiguity has tended to shape infantry tactics in recent decades. A Clausewitzian philosophy in World Wars I and II made objective easy to define. The objective of the Allied forces was to destroy German forces. In Vietnam, it was more difficult to define the objective. The complexity of the Threat Spectrum will add to this ambiguity. The military must possess tactics that will facilitate attainment of these goals in any type of environment. Empty Battlefield XXI tactics will facilitate attainment of these goals in high, mid and low intensity conflicts, focusing on the objectives peculiar to each of these unique environments.

A thorough understanding of all nine principles is necessary in order to understand current infantry doctrine, however these three will be paramount to the success of the proposed tactical changes. Maneuver is important because of the Army's increased ability to apply combat power to any portion of the battlefield. Surprise is important because of its potential to amplify existing strength; the Army may not have favorable force ratios given its recent reduction. Objective is important because the future threat may not present an easily identifiable target, especially in Operations Other Than War. The proposed tactics in Section V are designed to ensure that these three principles are inherent in any operation.

### **Current Doctrine**

The FM 7 series contains doctrine and tactics for the light infantry battalion, company, platoon, and squad. Specifically, FM 7-8 covers the Infantry Rifle Platoon and Squad, FM 7-10 covers the Infantry Rifle Company, and FM 7-20 pertains to the Infantry Rifle Battalion. Ideally, these manuals should support doctrinal principals espoused in FM 100-

5. However, the most current version of FM 100-5 was published in 1993. Each of the FM 7 series manuals were published before 1992. They are outdated because they do not adequately support the concepts contained in the newest version of FM 100-5.

Each manual provides doctrinal principles relevant to the applicable level unit, but based on versions of FM 100-5 two generations old. Each manual also includes sections on tactics, techniques, and procedures to serve in guiding the infantry leader. Complimenting each manual are corresponding mission training plans. These plans “contain those tasks that support the unit mission outlined in doctrinal manuals” The target audience for each of the manuals includes supervisors of infantry forces, from the battalion commander to the fire team leader. These soldiers belong to light, air assault, airborne and ranger units. As each of the manuals assumes the same format, FM 7-20, *The Infantry Battalion*, will serve as a basis for this portion of the discussion. However, it is important to understand that each of the manuals builds upon each other. FM 7-8, *The Infantry Rifle Platoon and Squad*, specifically states that “ platoons and squads normally conduct offensive operations as part of a larger force.”<sup>57</sup>

Under defensive operations, the manual describes eight types of defensive arrays. They include defense of a sector, defense from a battle position, defense from a rear slope, perimeter defense, linear defense, strongpoint defense, defense against an infiltration, and defense against an air attack. It also lists six other manuals the planner can use to obtain “guidance on establishing the defense in unique environments.”<sup>58</sup> Most of these arrays place the battalion in a relatively concentrated area. Only the defense of a sector places the unit in a dispersed pattern<sup>59</sup> Furthermore, though the chapter attempts to list several

defensive patterns adaptable to a variety of enemy formations, it does not explicitly cover the full threat spectrum explained in FM 100-5.

Under offensive operations, FM 7-20 lists five forms of maneuver that the battalion can use to reach an objective area. The first form is describes is the infiltration. It provides guidance for three different types of infiltrations (land, air, and water) and then provides advantages and disadvantages of the infiltration. The manual dedicates two pages to describe the infiltration but only dedicates one paragraph to each of the remaining four forms of maneuver (penetration, envelopment, turning movement, and frontal attack). Furthermore, it does not provide advantages nor disadvantages for these forms of maneuver.<sup>60</sup>

The chapter on offensive operations does not contain an explicit list of manuals to guide the planner in unique environments. In addition, though FM 7-20 lists a myriad of offensive and defensive operations, it does not adequately explain their relationship with the threat spectrum. None of the FM 7 series mention the use of Force XXI equipment. Subsequently, the tactics, techniques, and procedures in these manuals do not attempt to capitalize on the efficiency nor effectiveness of any of the Force XXI initiatives.

Given the current revolution in military technology, the series contains several shortcomings. Foremost is the absence of a detailed discussion on the battlefield disposition of light infantry units. Though the infantry squad manual gives suggested distances for members of a squad conducting a traveling movement, the company and battalion manuals do not provide similar figures. The company and battalion provide illustrations of various formations, but do not adequately address recommended distances

between subordinate units. They fail to sufficiently explain the inherent advantages of dispersed offensive and defensive operations.

#### **SECTION IV: Force XXI Operations**

TRADOC Pamphlet 525-5: *Force XXI Operations*, is “the Army’s evolving vision of future joint military operations.”<sup>61</sup> The purpose of the manual is to “describe[s] conceptual foundations for war and operations other than war in the early decades of the 21st century.”<sup>62</sup> Recognizing the impact of technological advances on the future battlefield, the authors subscribe to the theory that the Army is currently experiencing a military technological revolution.

The manual describes the future battlefield in terms of four criteria: battle command, extended battlespace, simultaneity, and spectrum supremacy. These four criteria cumulatively change the face of the battlefield and significantly impact on the marriage of military art and science. According to the authors, future battle command will witness the continuation of “the empty battlefield phenomena”.<sup>63</sup> The criteria used to describe the battlefield support this phenomena. Extended battlespace will result in “commanders [who] will seek to avoid linear actions, close in combat, stable fronts, and long operational pauses.”<sup>64</sup> Simultaneity describes a condition in which commanders will be able “to achieve multiple operational objectives nearly simultaneously throughout a theater of operations.”<sup>65</sup> Spectrum supremacy describes the influence that technology will have on the national will and support for operations in which US forces are involved. (p. 2-10)

The authors recognize that potential adversaries will also impact on the characteristics of the future battlefield. In describing future threats, the authors concede that in the immediate future “most of the conflicts involving the US Army will be OOTW

[Operations Other Than War] or low intensity conflicts.” However, they acknowledge the Army must be prepared to combat against “foes fielding advance, armor-mech based armies.”<sup>66</sup>

The authors indicate that technological improvements in information, command and control, and weapons systems will significantly impact on battlespace. In FM 100-5, battlespace is defined as “components determined by the maximum capabilities of a unit to acquire and dominate the enemy.”<sup>67</sup> FM 525-5 provides a more tangible definition by stating that battlespace is “that volume determined by the maximum capabilities of a unit to acquire and engage the enemy.”<sup>68</sup> Future technology will extend battlespace resulting in three distinct advantages over the enemy:

- Destroying the enemy before he has a chance to engage you.
- Reducing friendly vulnerability by increasing the dispersion and numbers of the friendly forces and physically massing only when necessary.
- Conducting maneuver by use of both fires and rapid physical mass and dispersion of ground forces to sense and dominate a greater battlespace.<sup>69</sup>

In short, the future battlefield will differ from the ones the US fought on in the past. The potential adversary will be more complex and will present itself in a variety of shapes and sizes. In addition, planners will be able to view the battlefield from a different perspective than they used in the past. They will be able to execute simultaneous rather than sequential operations. They will also be able to concentrate on several areas of the battlefield at one time.

The preceding terms and concepts describe the battlefield, both in war and OOTW, upon which light infantry units will operate. To test conceptual employment of forces, the

Army's Training and Doctrine Command (TRADOC) uses a multitude of studies and warfighting experiments including Prairie Warrior, the annual capstone exercise for the Command and General Staff Officer Course, CGSOC. The mechanism used to analyze futuristic, Force XXI concepts is the Mobile Strike Force (MSF). A 40,000 person experimental 'division', the MSF is equipped with a variety of advanced technological systems.<sup>70</sup> To affect command and control, the MSF uses several Army Battle Command Systems including Maneuver Control system Phoenix and the Advance Field Artillery Tactical Data System (AFATDS). Weapons systems include High Mobility Artillery Rocket System (HIMARS), Enhanced Fiber Optic Guided Missile (EFOG-M), and Precision Guided Mortars. Intelligence gathering assets include Common Ground Station and Unmanned Aerial Vehicles (UAVs).<sup>71</sup>

In support of Prairie Warrior and various Army warfighting experiments, Mobile Strike Force planners used ST 71-100-2010: *Principles, Tactics, Techniques and Procedures for the 2010 Digitized Force at the Division Level*. The manual dictates that the light infantry brigade "provides a forced entry capability" for the mobile strike force. In the MSF concept, the infantry brigade consists of 4 light infantry battalions. The advantages of the light infantry battalions will be their ability to maximize the capabilities of the combined arms team.<sup>72</sup> The following is a list of characteristics of the light infantry battalion as described in ST 71-100-2010.

- It will normally be dispersed, operating in elements from fire team to platoon size.
- It will be supported by precision indirect weapons systems in the offense and long range direct fire systems in the defense.

- The elements [of the battalion] will seek to strike targets and withdraw under favorable conditions thus avoiding being fixed and decisively engaged.
- It will rely on enhanced situational awareness, stealth, dispersion, and low signature air assault insertions and extractions for survivability.<sup>73</sup>

Operating in a dispersed fashion and exploiting combined arms capabilities (through precision munitions) enables the battalion to affect a higher commander's "simultaneous application of firepower."<sup>74</sup> Dispersed formations enable Force XXI battalions to infiltrate "instead of conducting a traditional movement to contact."<sup>75</sup> One of the proponents of the Mobile Strike Force and designers of Force XXI tactics and doctrine, Brigadier General Huba Wass de Czege (USA, Retired), explains that Force XXI engagements will be characterized by the term ambush. Ambush dynamics in the offense will entail stealthy preparation, 'just in time' positioning, massive concentration of precision fires and rapid exploitation.<sup>76</sup>

The enabling factor which facilitates these operations is situational awareness. The concept of situational awareness will enable the friendly force to position units in support of this 'ambush'. Situational awareness is a function of all sources of information (SIGINT, ELINT, and HUMINT) combined with the ability to transmit friendly and enemy templates to all units on the battlefield. Wass de Czege explains that offensive operations will be further characterized by a man to man concept, assigning an enemy unit to each friendly unit. Similarly, defensive operations will be characterized by webs of engagement areas. With situational awareness, light infantry units will be able to identify and maneuver to engage their 'assigned' foe.<sup>77</sup> In defeating its opponent, the light infantry will exploit the concept of combined arms.

A critical role that infantry units will play in Force XXI combined operations consists of establishing 'sensor to shooter' linkages.<sup>78</sup> The infantry battalion's ability to infiltrate in the offense will enable it to guide a plethora of precision guided munitions deep into enemy defensive belts. While in the defense, in early entry stages, the infantry battalion's dispersed defensive array will provide critical force protection while positioning it to guide munitions onto advancing enemy elements. To fulfill these proposed missions, the light infantry community must radically change current tactical employment techniques and procedures.

#### **SECTION V: Empty Battlefield XXI - Force XXI Light Infantry Tactics for War, Combat, and Peacetime Operations**

In his book, *The Air Campaign*, Colonel (Ret.) John Warden writes about the difficulty inherent in attempting to validate new concepts and tactics. He explains that "in affairs such as war that are only roughly subject to scientific analysis, and where so much depends on the human element, a hypothesis is virtually impossible to prove."<sup>79</sup> To support this claim, he reviewed the air campaign against the German infrastructure during World War II, explaining why Germany's petroleum system was not the first nominated target for destruction after air superiority was established. In his opinion, selecting the petroleum system as a target was not considered acceptable. He claims that an "in and out campaign" or use of "an indirect approach has been [was] relatively rare and therefore is [was], by definition, radical."<sup>80</sup> In short, emerging concepts for air components were not acceptable because they were somewhat revolutionary.



A similar dichotomy applies to the evolution of light infantry tactics over the last 13 years. In his monograph on modern principles for the employment of light infantry units, Colonel D. Davis cites Basil Hart's concept of the 'expanding torrent'.<sup>81</sup> The torrent was a phrase that Hart used to describe the modern concept of penetration. Conducting research for the dictum in 1988, Colonel Davis was exploring the feasibility of employing light infantry throughout the depth of the battlefield in a mid-intensity conflict. He was analyzing historic examples of infantry operations in order to draw lessons for the newly formed light infantry units. Though light infantry units began four years prior to Davis's writing, their employment, relative to a NATO-European scenario, was still in question.

Hart's expanding torrent concept was derived from German infiltration techniques used during World War I on the Western Front.<sup>82</sup> The study of German infiltration tactics augmented Hart's later writings on the concept of the indirect approach. During World War II, the Germans expanded on their innovations with the concept of Blitzkrieg. As a radical deviation from accepted doctrinal principles, the concept of Blitzkrieg constituted a Military Technical Revolution (MTR). In *Bayonets Before Bullets*, Soviet theorist Aleksandr Svechnik explains that an MTR was a function of the impact of technology on operations and tactics during the World War I years.<sup>83</sup> Succinctly stated, an MTR "occurs when the applications of new technologies into military systems combined with innovative operational concepts or organizational adaptation to alter, fundamentally, the character and conduct of military operations".<sup>84</sup> An MTR produces "a dramatic improvement in military effectiveness and combat potential".<sup>85</sup> MTR is not simply a change in procedure; it is characterized by the magnitude of the change. TRADOC Pamphlet 525-5 continues the discussion by explaining that the Germans use of tanks,

improved aircraft, and radios in World War II did not constitute an MTR. However, the concept of Blitzkrieg, a function of new systems, did constitute an MTR.<sup>86</sup>

On the eve of Force XXI, discussions on the employment of light infantry are even more pertinent for another reason. Downsizing, increased adversaries, and doctrinal changes mandate that the military optimize the potential of light infantry units. Much like the designers of the expanding torrent, the Army must exploit all possible means of using light infantry units.

In order to understand the impact of the MTR caused by Force XXI initiatives, one must be familiar with the environment the future infantryman will encounter. FM 100-5 describes the range of military operations that can occur in these environments: war, conflict, and peacetime. Figure 1 provides descriptions of these environments with intended goals for military operations.

States of the Environment	Goal	Military Operations	Examples
WAR	Fight and Win	WAR	Large scale combat Attack Defend
CONFLICT	Deter and Resolve Conflict	OTHER THAN WAR	Strikes and raids Peace enforcement Support to insurgency Anti-terrorism Peacekeeping NEO
PEACETIME	Promote	OTHER THAN WAR	Counterdrug Disaster relief Civil support Peace building Nation Building

**Figure 1**<sup>87</sup>

The passage also explains that “non-combat operations might occur during war, just as some operations other than war might require combat”.<sup>88</sup> Such an environment has the

potential to significantly confuse the combat soldier attempting to use tactical solutions to support operational and strategic goals.

With the advent of the military technological revolution, the problem becomes one of determining suitable tactics for the infantryman in order to facilitate success on any battlefield. Clausewitz provides some insight to this dilemma by implying that the goal in military operations is 'to impose your will upon the enemy'. He also expounds on the subordination of military goals and objectives to political goals and objectives. The imposition of restraint, a function of military as a subset of political, results in a degree of limitation on military operations. Subsequently, military leaders attempt to impose control over the enemy commensurate with stated political goals.

Friendly units array forces on the battlefield in order to impose their will on the enemy. Over the last 150 years, this disposition has evolved from a relatively concentrated formation to a relatively dispersed pattern, thus the 'empty battlefield'. For example, during the US Civil War, coverage of a ten square kilometer area required 38,830 soldiers. During World War II, the same area only needed 369 soldiers, while during Operation Desert Storm, approximately 23 soldiers could cover the same area.<sup>89</sup>

Simple analysis shows a steady decrease in the number of soldiers required to cover this area. The proposed tactics for Empty Battlefield XXI conceptually use an inverse process to array an infantry battalion on the battlefield. Simply stated, the concept proceeds from a relatively small ratio to a higher concentration of forces, as required by METT-T. The following illustrations provide demonstrations of this array in war, conflict, and peacetime. Additionally, the intent of the new tactics is to provide a common foundation from which light infantry units can operate in each environmental state.

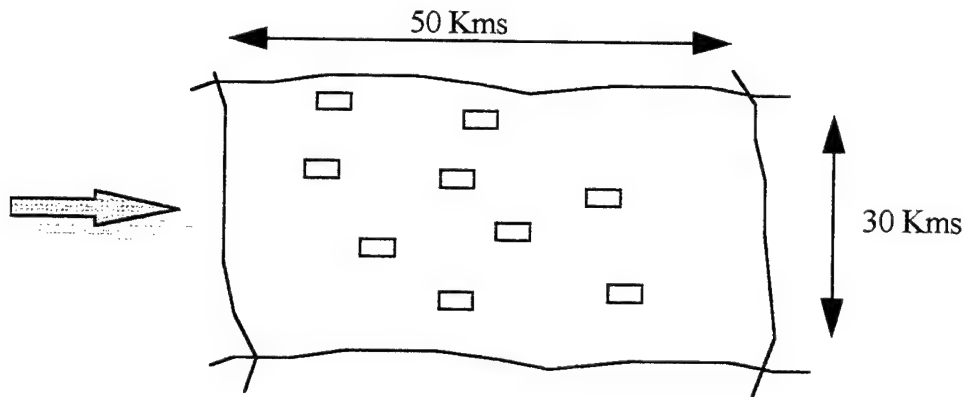
## **Scenario I War (Large Scale Operations)**

A European scenario provides an arena to demonstrate the disposition of forces in this environment. Force XXI Light Infantry's ability to operate in this environment as a significant combat force has been the subject of debate for several years. During the defense, light infantry deploys in an array currently associated with covering force operations. However, the mission of the unit will be to defend. They will form of grid of positions to cover their assigned area, using a variety of tools to enhance situational awareness and command and control. When specified enemy locations are detected, they will mass on that area with each subordinate element assigned to a portion of the enemy formation.

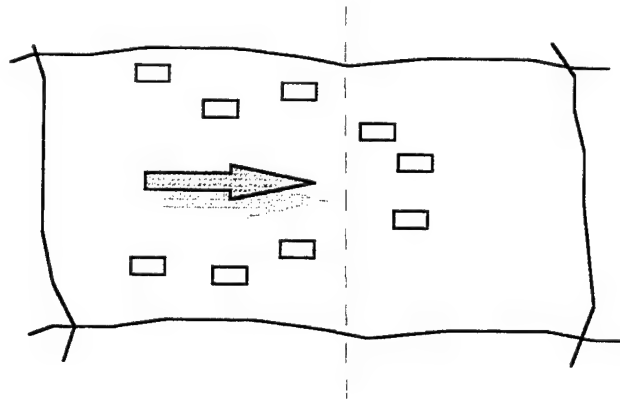
Similarly, light infantry units will be a significant threat during offensive operations. Capitalizing on their ability to infiltrate, these units can maneuver around front line defenses in order to strike softer targets in the enemy's rear. This ideology will not emphasize turning movements for they advocate influencing the enemy through presence. Unlike today's tactics of envelopment or turning movement, Force XXI units will be able to conceal their presence until they mass on selected targets for destruction. Their ability to disperse rapidly will enhance force protection through passive means and also posture them to strike subsequent targets or assist in exploitation and pursuit operations. An example of the way light infantry units will operate in a high intensity conflict, both in the offense and defense, is provided in Figures 2 and 3.

### Empty Battlefield XXI in a High Intensity Scenario (Defense)

Scenario: The light infantry battalion operates as a covering force for a division defense. The type of defense could be an area or a mobile defense. The task of the infantry battalion is to destroy the Forward Detachment (FD) of the enemy main body.



Operating as dispersed platoons, the battalion establishes outpost positions throughout the division security area. This disposition enables the battalion to detect and destroy enemy reconnaissance units. Remaining mobile prevents the enemy from targeting platoon outpost positions. The enemy FD enters the battalion's sectors and outposts visually identify it. Platoons and squads making initial contact begin to retrograde while platoons and squads not in contact move to engage the enemy flanks in depth.



The platoons and squads initially making contact withdraw to a predetermined location. The selection of this location allow adequate time for platoons and squads out of contact to position themselves along the enemy flanks in depth. Once all forces are in position, the battalion turns on remotely activated minefields and guides precision munitions onto the enemy formation to create an 'ambush' like defense.

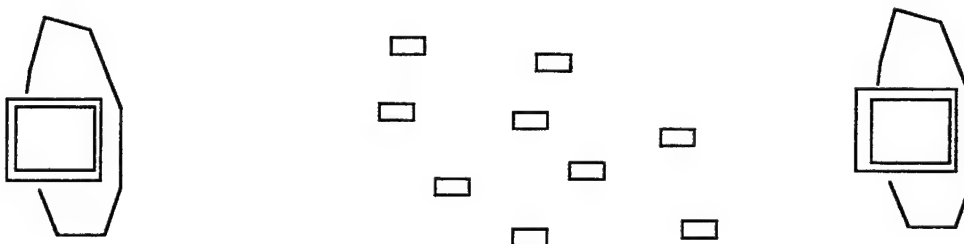
Figure 2

## Empty Battlefield XXI in a High Intensity Scenario (Offense)

Scenario: The light infantry battalion is tasked to attack the second echelon of an enemy formation as part of a division attack. The enemy second echelon constitutes the division's deep objective.



Operating as dispersed platoons and squads, the battalion conducts an infiltration through the enemy's first echelon defenses.



The battalion continues the infiltration until it reaches the enemy second echelon. The battalion then positions itself to attack the enemy second echelon. It does not occupy attack positions until the remainder of the division conducts the attack on the enemy first echelon.



Remaining in a dispersed formation, the battalion can wait until this attack commences. Once the attack commences, the battalion begins its attack on the enemy second echelon. The division commander has achieved simultaneous attacks on the first and second echelon, severely degrading the enemy commander's decision making abilities.

**Figure 3**

## Scenario II (Conflict - Support to Counterinsurgency)

The Joint Readiness Training Center habitually trains light infantry in the principles of conflict in a low to mid intensity conflict. Upon arrival at the training center, the unit prepares for combat under the guise of an intermediate staging base. At a specified time, the unit enters the 'box' in order to counter the actions of the insurgent opposing force. The 'box' is a training area, usually representing a island country, in which the insurgent force operates against the legitimate government. Throughout the exercise, the opposing force threat escalates from low intensity to mid intensity with the introduction of limited numbers of mechanized forces. The light infantry uses FM 7-98, *Operations in a Low Intensity Conflict*, to explain tactics, techniques, and procedures applicable to this environment.

FM 7-98 begins its guidance on countering insurgent forces by explaining that "the goal of the insurgent movement is to replace the established government." <sup>90</sup>The publication illustrates that, to achieve this goal, an insurgency progresses through three stages. These stages, with descriptions of their characteristics, are outlined in Figure 4.

PHASE	NAME	CHARACTERISTICS
I	LATENT AND INCIPIENT INSURGENCY	<ul style="list-style-type: none"><li>-Activity ranges from subversive activity to activities in a pattern</li><li>- No major outbreaks of violence</li><li>- Selected acts of terrorism</li><li>- Can achieve victory in this phase</li></ul>
II	GUERRILLA WARFARE	<ul style="list-style-type: none"><li>- Initiation of organized continuous guerrilla warfare or related forms of violence.</li><li>- Has gained sufficient local external support.</li><li>- Attempts to force government into defensive role.</li><li>- Begins to conduct larger operations</li></ul>
III	WAR OF MOVEMENT	<ul style="list-style-type: none"><li>- Begins to use more conventional tactics engaging government forces in decisive combat.</li><li>- May obtain combat forces from external forces.</li><li>- Can also begin defensive operations to protect areas he already controls.</li></ul>

Figure 4<sup>91</sup>

The US objective in this type of environment is to “maintain or return to routine peaceful competition and to allow for the development of democracy with the free world.”<sup>92</sup>

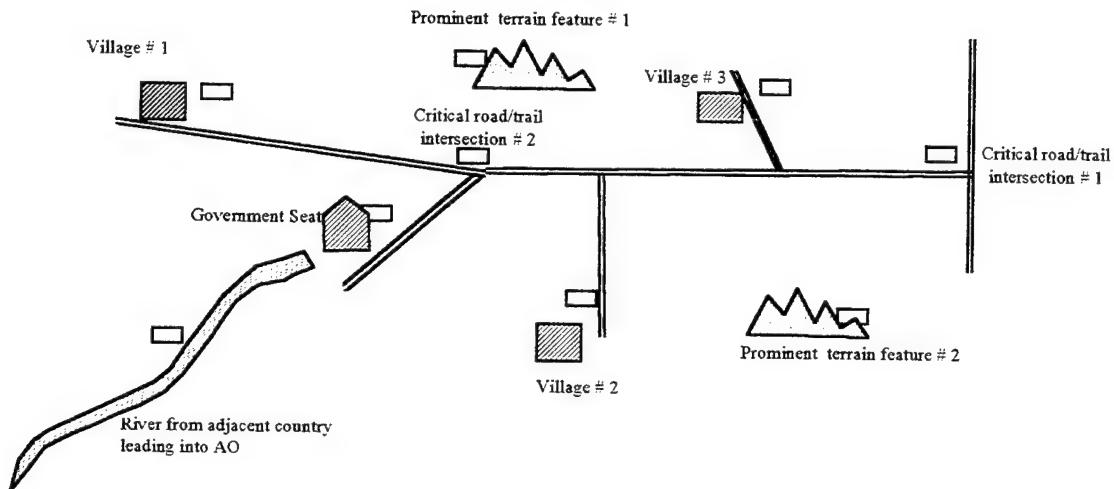
During Phase I of a counterinsurgency, US forces will conduct police type operations (i.e. individual searches, checkpoints and roadblocks, and cordon and search operations).

During Phase II, the unit conducts search and attack techniques. Phase III begins the employment of conventional means of warfare. Current tactics accommodate an easy transition to Battlefield XXI tactics during these operations. FM 7-20 already addresses both cordon and search and the search and attack operations.<sup>93</sup> Figure 5 provides an example of the way light infantry units will operate in a mid and low intensity conflict.

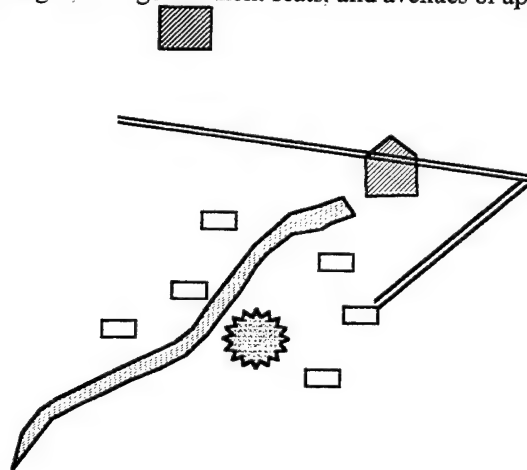


## Empty Battlefield XXI in a Mid to Low Intensity Scenario

Scenario: The battalion is operating in its assigned area of operations as part of a larger unit's counterinsurgency operation. Intelligence indicates that the insurgent is still in Phase I of an insurgent conflict.



The battalion occupies key terrain to identify enemy movement throughout its area of operations. Key terrain could be villages, area government seats, and avenues of approach into the area.



The battalion conducts reconnaissance patrols in order to detect evidence of enemy presence and to determine enemy patterns. When it identifies a lucrative target, e. g. an enemy supply base, platoons and squads move into position to attack the target. The battalion then disperses to retain control over the area of operations. Fluid positioning will negate the enemy's ability to template friendly forces.

**Figure 5**

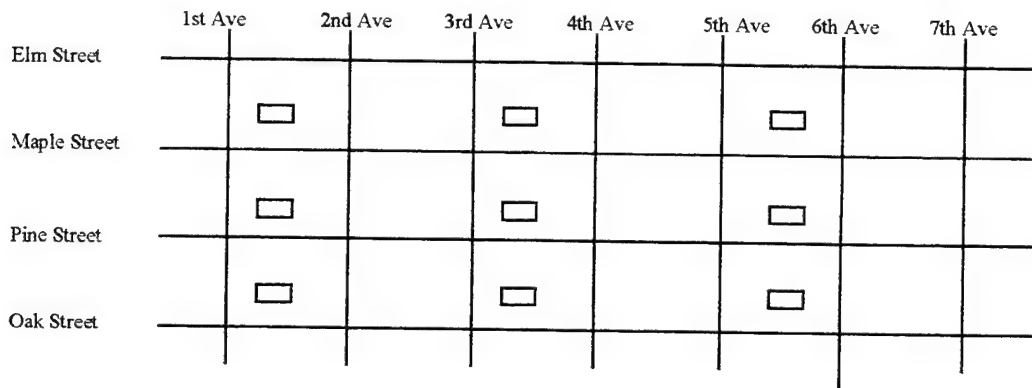
### Scenario III (Non-Combat)

Non-combat operations include a variety of situations for the light infantryman tasked with supporting another support operation. FM 100-19, *Domestic Support Operations*, provides guidance for one type of operation in a non-combat environment. It begins by stating that "domestic support operations are not new." In the past, the Army has "actually administered governmental affairs until the fledgling local government became a viable entity."<sup>94</sup> Categorized as a peacetime operation, the manual reiterates the principles of operations other than war to guide the planner's thought process. The principles for operations other than war include objective, unity of effort, legitimacy, perseverance, restraint, and security.<sup>95</sup>

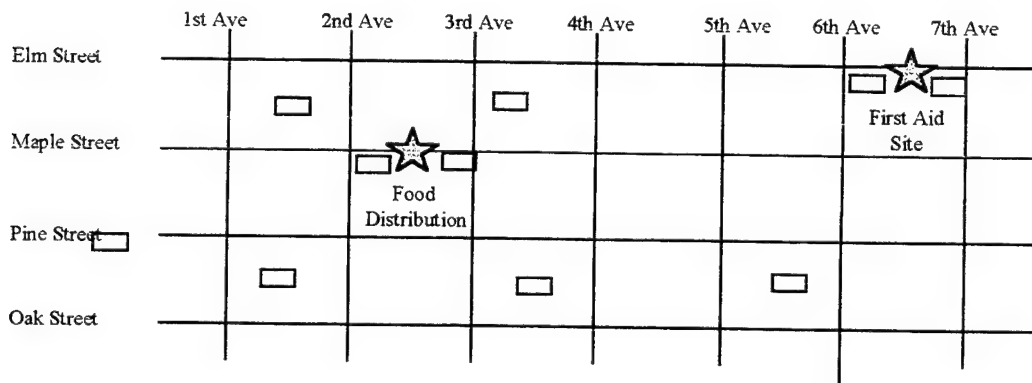
Of particular importance is a discussion on the Army's suitability to conduct these operations, normally conducted in three stages (response, recovery, and restoration).<sup>96</sup> "The Army's structure and training in command and control, deployability, and sustaining operations offer ready and robust capabilities for disaster assistance support. Those same skills that soldiers and leaders use day to day often translate to the types of tasks required during disasters."<sup>97</sup> Essentially, the Army offers a command hierarchy capable of facilitating control over an affected area. This command mechanism helps to synchronize the efforts of other agencies participating in the relief effort. Participation in domestic support operations for infantry soldiers is similar to nation assistance on foreign soils. An example of the way light infantry units will operate in a non-combat environment is provided in Figure 6.

## Empty Battlefield XXI in a Non-Combat Scenario

Scenario: The battalion operates as part of a larger unit in a non-combat environment in response to a natural disaster. The scenario could be on foreign territory or in a domestic arena.



The battalion occupies its area of operations in order to conduct initial estimates as part of the recovery phase of this operation. The battalion maintains a dispersed formation to 1) conduct the reconnaissance and 2) provide visibility to the indigenous personnel.



Initial reconnaissance will reveal where the battalion needs to concentrate its efforts. Those areas that need relatively more assistance are labeled as key terrain. Examples of these areas are food and clothing distribution sites. The battalion masses additional forces into the areas, as required. The remainder of the forces continue to operate in a dispersed manner, maintaining a visible presence throughout the conduct of other duties (e.g., removal of debris).

**Figure 6**

## **SECTION VI: Case Studies**

The Armed Forces have attempted to adopt tactics similar to Force XXI initiatives on several occasions in recent history. The 9th Infantry Division (ID) - High Technology Test Bed (HTTB) and the Marine Combat Platoons (CAP) are examples of units that exhibited 'empty battlefield' characteristics in a positive manner. These characteristics exemplify positive attempts to exploit the potential of Light Infantry units through dispersion and revolutionary tactics. Though the employed tactics were successful, they were not fully adopted because of external influences. The 9th ID HTTB was terminated because of a reduction in the military budget. The Marine Combat Action Platoon Program was not wholly accepted because of a resistance to change and a fixation on tangible results.

Analysis of these programs is important because 1) they demonstrated the potential of Force XXI like tactics, and 2) they demonstrated an attempt to evolve towards Force XXI like tactics, and 3) they demonstrated a deliberate attempt to increase battlefield dispersion for positive reasons. The 9th ID HTTB authenticated the ability of light infantry units, equipped with mobility enhancements, to successfully operate on a high intensity battlefield in a dispersed manner. The Marine CAPs demonstrated the ability to successfully operate against an insurgent force in a low intensity environment using dispersed formations.

In 1981, the 9th Infantry Division changed its organization in order to test a concept for the Chief of Staff of the Army (CSA)<sup>98</sup>. The CSA wanted to develop a light infantry division that could deploy rapidly but still engage heavy threat forces. This tasking resulted in the 9th Infantry Division HTTB, an active unit from 1981 until its deactivation in 1985. During this period, the Army experimented with a mounted light infantry unit

that maximized dispersion and utilized evolutionary tactics. The doctrinal concepts and tactics for the unit are important because they are similar to several of the initiatives espoused in Force XXI concepts.

The division's tactics nested within the tenets of Airland Battle contained in FM 100-5 (1986 version).<sup>99</sup> Two tenets, 'expand to fight to the limit of the area of influence' and 'deceive to gain surprise', greatly impacted on the 'empty battlefield' philosophy. In order to further impact on the 'empty battlefield' ideology, the division organized to maximize battlefield mobility. The vanguards of the division would be Light Attack Battalions (LABs) and Combined Arms Battalions (CABs).<sup>100</sup> Further investigation of the organizations reveal striking similarities to the Mobile Strike Force Light Infantry Battalions.

The Light Attack Battalion (LAB) consisted of three companies equipped with Fast Attack Vehicles (FAV). Though the Army never developed the FAV, the prototype that the battalion used was a combination of commercial dune buggies and High Mobility Multi-Purpose Wheeled Vehicles (HMMWV). This unit, organized to fight mechanized and armored forces, had no ability to dismount personnel. They were "an agile force that can [could] often out maneuver" other heavier forces.<sup>101</sup> Subsequently, "to increase survivability, platoons typically are [were] deployed over a distance of one and a half to two kilometers. Ideally the depth of sector allows[ed] the unit to engage, disengage, withdraw to a subsequent position and prepare to reengage the enemy force before it regains[ed] momentum."<sup>102</sup> Force XXI tactics call for similar tactics among its light infantry forces.

The Combined Arms Battalion (Light) consisted of two light motorized companies and one company of Armored Guns with Mark 19s and HMMWV TOWs.<sup>103</sup> This battalion differed from the LAB because it possessed a dismount capability; each company had a dismount strength of approximately 80 soldiers. The CAB more closely demonstrated tactical similarities with Force XXI Light Infantry than the LAB because of its dismounted capability. During offensive operations, the CAB habitually maximized dispersion and its ability to fight at night. It also capitalized on the use of "infiltration tactics along an indirect approach whenever possible."<sup>104</sup> The CAB's subsequent actions following an attack are also contained in Force XXI initiatives. After striking an enemy, "should it be necessary, the CAB disperses rapidly to avoid indirect fire and air attack. The CAB then redeploys to destroy enemy counterattacks by further offensive action."<sup>105</sup>

The CAB's defense also mimicked Force XXI characteristics as it is local and temporary. "The CAB disperses out of contact to deceive the enemy as to the location of the engagement area until it is too late for it to be bypassed. . . placing fire on the enemy flank's using maneuver and ambush tactics."<sup>106</sup> Movement throughout defensive operations in order to regain the offensive was paramount.

Evaluation plans for the LAB and CAB demonstrated several initiatives to maximize battlefield dispersion. In the defense, planners tasked the battalions to operate as covering forces or as counter-attack forces against enemy second echelons. In the offense, they capitalized on "superior mobility and firepower through use of infiltration or air assaults."<sup>107</sup> Offensive missions included advance guards and deep strikes.<sup>108</sup>

The 9th ID demonstrated successful employment of these concepts throughout its tenure. The Army tested the ability to conduct a variety of missions from 1984 through

1986 with the capstone exercise being Operation Laser Strike. Deploying to Fort Bliss, Texas, the division's 3rd Brigade fought against the 3rd Armored Cavalry Regiment in a free-play exercise. The 3rd Brigade Commander's intent was to "attack enemy flanks and rear by fighting a non-linear battle."<sup>109</sup> He wanted to "focus combat power on high value enemy targets" rather than "slugging it out" with the enemy. The brigade accomplished the commander's intent, performing extremely well against the cavalry regiment. It demonstrated that "it could fight against a reinforced armor brigade" and win.<sup>110</sup>

In 1987, after having achieved an unforeseen level of success, the 9th Infantry Division HTTB was terminated due to defense budget cuts.<sup>111</sup> The deactivation of the division resulted in the termination of its revolutionary tactics. Though the division attempted to exploit positive aspects of the 'empty battlefield' and performed remarkably, budgetary constraints stopped the process. The evolution in infantry tactics would remain stagnant for seven more years, until the inception of Force XXI initiatives.

Another unit that capitalized on dispersion to maximize potential was the Marine Combat Action Platoon from the Vietnam Era. A study of this program is important to demonstrate the value of dispersion in a low intensity, insurgent environment. The US Marine Corps, attempting to identify productive tactics in Vietnam, devised organizations of composite US/Vietnamese platoons dispersed throughout the Vietnamese theater. The desired intent was to counter an enemy force involved in Phase I of an insurgency. Advocates of the program believed that "the real war is [was] among the people and not among the mountains."<sup>112</sup> They endorsed a policy of "clear and hold" rather than "search and destroy". Placing forces 'among the people' enabled the US

military forces to 'clear it [the area of operations]' of insurgent forces.<sup>113</sup> These forces were to 'hold' until other instruments of US power could defeat the insurgent movement.

To accomplish this endstate, the Marines formed Combat Action Platoons (CAP). A CAP consisted of a Marine squad and a platoon of Popular Forces (PF). Though conceptually under the Army of the Republic of Vietnam (ARVN), the PFs were in actuality the village chief's military unit.<sup>114</sup> Started in 1966, the Corps organized and deployed 114 CAPs into four regional Combined Arms Groups by 1970.<sup>115</sup>

The purpose of the CAP was to undermine the influence of the initial stages of a Maoist-like insurgency. Though the Marine squads maintained a liaison with an affiliated Marine battalion, they lived in their assigned villages and hamlets. This situation enabled them to decrease the influence of the Viet Cong by denying them access to these areas. Occupied by Marine CAPs, the Viet Cong were not able to reestablish control in those villages.<sup>116</sup>

Michael Petersen, author of *The Combined Action Platoons*, provides tangible criteria to support his belief that the program demonstrated a successful shift from conventional tactics in repulsing an insurgency. He claims that village chiefs were able to remain in their homes after darkness. He also indicates the Viet Cong tax collection and propaganda decreased dramatically. The platoon's dispersion also increased the anxiety level of the Viet Cong. With the CAP's dispersion, the Viet Cong could not determine how many forces were in a given area.<sup>117</sup>

Though never quantifiably justified, the program had a lot of merit. With a predominant continuation of conventional warfare by the remainder of the military, one cannot objectively analyze the effectiveness of the CAPs. However, given some indicators



of success, one wonders if the conflict would have ended differently had the military adopted this program as its main strategy.

## **SECTION VII: Analysis**

### **Evolution of Tactical Dispersion**

The Army is currently in a position in which it can use Force XXI initiatives along with dispersion to incur an MTR. This MTR will not occur simply by enhancing current tactics, techniques, and procedures (TTP) with emerging technical equipment and munitions. For the MTR to occur, the Army must experience a radical shift from its present TTPs. For the Light Infantry Battalion, Empty Battlefield XXI tactics could constitute its portion of the MTR. The Empty Battlefield XXI is a template for battlefield disposition that these battalions can use in conflicts against opponents throughout the Threat Spectrum. These tactics will change training philosophies, decision making processes and issuance of orders. In short, it will radically change the way light infantry prepares for and conducts operations against adversaries, but it will provide them with a decisive advantage in any environment as well.

### **Doctrinal Considerations**

The Threat Spectrum has always impacted on the formulation of military doctrine. In the past, this doctrine consisted of a relatively narrow scope, focusing on the biggest threat facing the US at the time. The World War period focused on a European scenario with a fixation on overwhelming force. The Pentomic Era focused on the potential for nuclear munitions. The Cold War period, influenced by the Arab-Israeli conflicts and the Soviet Union threat template, focused on armor-mech based opponents. The current

Threat Spectrum does not facilitate such a narrow focus. It is so complex that the military cannot identify the characteristics of the opponents it will face with any level of statistical probability. It must develop doctrinal concepts and corresponding TTPs that are useful in all environments.

With the current reduction in forces and cuts in the defense budget, these TTPs must achieve the biggest output for the smallest input. Light infantry needs to have tactics that will enable them to train and perfect these adaptable tactics. They will not be able to concentrate on a small set of TTPs applicable to only theater or against only one type of opponent. Gone are the days of endless resources that allowed the infantry to perfect one set of TTPs for a high intensity conflict, one for a low intensity conflict, and one for peace operations. In addition, with only 2 light division (4 including the 82nd Airborne and 101st Air Assault Divisions), one division can no longer be identified for only one type of operation. The potential for simultaneous peacekeeping, peace enforcement, disaster relief, or war in several theaters mandates that each of these divisions be proficient in all environments. Empty Battlefield XXI tactics will facilitate this required proficiency.

## **History**

The emergence towards dispersion has been a multi-national effort. Armies of various nations realized the value of dispersion and sought to inculcate it into their tactics.

Provided the Fleet Marine Force's assertion "if we are ignorant of the changing face of war, we will find ourselves unequal to its challenges" is correct, the Army and the light infantry must develop these tactics now. If it does not, some other military organization will. Instead of benefiting from the potential strengths of Empty Battlefield XXI tactics, the Army will be forced into a position of combating against them. The Army has the

technological tools to impact on command and control, spectrum supremacy, and overwhelming firepower. It has demonstrated its proficiency in the past and now has even greater resources at its disposal to refine the process.

### **SECTION VIII: Conclusion**

The purpose of this dictum is to determine a need for a change in infantry tactics. In the author's opinion, the Armed Forces are currently experiencing a military technological revolution. The dawn of Force XXI is radically changing the manner in which the US conducts its wars. Some people are afraid of this change. They think that soldiers will become over dependent on technology and lose their warfighting skills. Others believe that older tactics have demonstrated potential. They do not want to change because they want to leave 'good enough' alone.

However, through research, the author learned that new warfighting techniques are as evolutionary as they are revolutionary. Since the birth of infantry units, tacticians have increased unit dispersion in order to optimize the potential of infantry units. From the pikeman to the skirmisher to the light infantryman, battlefield dispersion has steadily increased. Along with this dispersion comes an increase in the lethality of infantry units, capitalizing on the ability to maximize the principles of surprise, maneuver, and objective using standardized tactical dispositions.

Like battlefield dispersion, the complexity of the Threat Spectrum has increased steadily over time, as well. In the past, the threat assumed a homogeneous form. Now, the variety of disguises that the threat can don are seemingly endless. Adding to battlefield complexity are technological improvements in the instruments of war. The

Army can see the battlefield and engage opponents with unprecedented efficiency and accuracy.

To maintain its status as the premiere fighting force, the Army must adapt to this ever-changing environment. Adoption of Empty Battlefield XXI tactics for light units will enhance this required change. Empty Battlefield XXI tactics will enable light infantry units to operate in a standard manner in all levels of war. In addition, it will optimize the unit's ability to employ stealth, surprise, and the inherent power of the infantryman. The tactics will elevate the light infantryman to the status of the predominant killer in a high intensity conflict. They will also enable him to exercise required control over his area of operations in low intensity and peacetime environments. To achieve these goals, light infantry units need to internalize the concepts of Empty Battlefield XXI - light infantry tactics for the future.

## APPENDIX 1: Endnotes

---

<sup>1</sup> Liddell Hart, *The Future of Infantry* (Harrisburg: Military Service Publishing Co., 1936), 8-9.

<sup>2</sup> Dennis J. Reimer, *Force of Decision . . . Capabilities for the 21st Century* (Washington, D.C.: Department of the Army, 1996), 13.

<sup>3</sup> Department of the Army, *TRADOC PAMPHLET 525-5: Force XXI Operations*, (Washington, D. C.: Government Printing Office, 1994), 2-1.

<sup>4</sup> Reimer, 13.

<sup>5</sup> *Ibid.*, 11.

<sup>6</sup> Department of the Army, *TRADOC PAMPHLET 525-5: Force XXI Operations*, 2-5 - 2-6.

<sup>7</sup> Department of the Army, *FM 100-5: Operations* (Washington, D. C.: Government Printing Office, 1993), 2-0.

<sup>8</sup> Department of the Army, *FM 100-5: Operations* (Washington, D. C.: Government Printing Office, 1993), 13-0.

<sup>9</sup> Rolland A. Dessert, "Mobile Strike Force: An Experiment in Future Battle Command," *Military Review* (July-August 1996): 37.

<sup>10</sup> Chesney Memorial Gold Medal Lecture given by Michael Howard, [3 October 1973].

<sup>11</sup> Hart, 10.

<sup>12</sup> *Ibid.*, 10-12.

<sup>13</sup> *Ibid.*, 13-16.

<sup>14</sup> *Ibid.*, 19.

<sup>15</sup> *Ibid.*, 21.

<sup>16</sup> Paddy Griffith, *Forward Into Battle: Fighting Tactics from Waterloo to the Near Future* (England: The Crowood Press, 1981), 55-56.

---

<sup>17</sup> Hart, 17.

<sup>18</sup> Griffith, 56.

<sup>19</sup> Ibid., 56.

<sup>20</sup> Ibid., 59.

<sup>21</sup> Hart, 23.

<sup>22</sup> J. F. C. Fuller, *Sir John Moore's System of Training* (London, 1924) quoted in Paddy Griffith, *Forward Into Battle: Fighting Tactics from Waterloo to the Near Future* (England: The Crowood Press, 1981), 57.

<sup>23</sup> Griffith, 59-60.

<sup>24</sup> Ibid., 60.

<sup>25</sup> James J. Schneider, "The Theory of the Empty Battlefield," *Journal of the Royal United Services Institute for Defence Studies*, 132[3] (1987): 38.

<sup>26</sup> Ibid., 38.

<sup>27</sup> Ibid., 40.

<sup>28</sup> Ibid., 40.

<sup>29</sup> Ibid., 38.

<sup>30</sup> Ibid., 42.

<sup>31</sup> Ibid., 42.

<sup>32</sup> Griffith, 71.

<sup>33</sup> A. J. Bacevich, *The Pentomic Era: The U. S. Army Between Korea and Vietnam* (Washington, D. C.: National Defense University Press, 1986), 67.

<sup>34</sup> Ibid., 42.

<sup>35</sup> Ibid., 42.

---

<sup>36</sup> John A. Wickham, *Light Infantry Divisions: White Paper* (Washington, D. C.: Department of the Army, 1984), 1.

<sup>37</sup> Ibid., 1.

<sup>38</sup> Ibid., 1.

<sup>39</sup> Ibid., 2.

<sup>40</sup> Ibid., 2.

<sup>41</sup> David Gates, *Light Divisions in Europe: Forces of the Future* (London: Alliance Publishers, Ltd., 1989), 33-34.

<sup>42</sup> Ibid., 33.

<sup>43</sup> Ibid., 42.

<sup>44</sup> Ibid., 46.

<sup>45</sup> Ibid., 13.

<sup>46</sup> Ibid., 43.

<sup>47</sup> Department of the Army, *FM 100-5: Operations*, 2-4.

<sup>48</sup> Ibid., 2-5.

<sup>49</sup> Ibid., 2-5.

<sup>50</sup> Ibid., 2-5.

<sup>51</sup> Ibid., 2-5.

<sup>52</sup> Ibid., 2-5.

<sup>53</sup> Ibid., 2-5.

<sup>54</sup> Ibid., 2-4.

<sup>55</sup> Ibid., 2-4.

<sup>56</sup> Ibid., 2-4.

---

<sup>57</sup> Department of the Army, *FM 7-8: Infantry Rifle Platoon and Squad* (Washington, D. C.: Government Printing Office, 1992), 1-2.

<sup>58</sup> Department of the Army, *FM 7-20: Infantry Rifle Battalion* (Washington, D. C.: Government Printing Office, 1992), 4-15.

<sup>59</sup> *Ibid.*, 4-15.

<sup>60</sup> *Ibid.*, 3-6.

<sup>61</sup> Department of the Army, *FM 525-5: Force XXI Operations*, 1.

<sup>62</sup> *Ibid.*, 1.

<sup>63</sup> *Ibid.*, 2-8.

<sup>64</sup> *Ibid.*, 2-9.

<sup>65</sup> *Ibid.*, 2-9.

<sup>66</sup> *Ibid.*, 2-10.

<sup>67</sup> Department of the Army, *FM 100-5: Operations*, Glossary-1.

<sup>68</sup> Department of the Army, *FM 525-5: Force XXI Operations*, 3-8.

<sup>69</sup> *Ibid.*, 3-9.

<sup>70</sup> Huba Wass de Czege, "Mobile Strike Force: A 2010 Potential Force," *Military Review* (July-August 1996): 70.

<sup>71</sup> Dessert, 37.

<sup>72</sup> Department of the Army, *ST 71-100-2010: Principles, Tactics, and Procedures for the Digitized Brigade* (Fort Leavenworth: Command and General Staff College, 1995), 2-13.

<sup>73</sup> *Ibid.*, 2-13 - 2-14.

<sup>74</sup> Lon E. Maggart and Randall L. Rigby, "Shaping Battlespace: More than Just Deep Attack," *Field Artillery* (November - December 1995): 12.

<sup>75</sup> *Ibid.*, 21.



---

<sup>76</sup> Class given by Huba Wass de Czege at the Command and General Staff College, Fort Leavenworth, Kansas, 3 January 1996.

<sup>77</sup> Ibid.

<sup>78</sup> Wass de Czege, 82.

<sup>79</sup> John A. Warden, *The Air Campaign: Planning for Combat* (Washington, D. C.: National Defense University Press, 1988), 16.

<sup>80</sup> Ibid., 136.

<sup>81</sup> Danny M. Davis, "Infantry Attacks: Operating Principles for the Offensive Employment of Modern Light Infantry Units" (Graduate Thesis, U. S. Army Command and General Staff College, 1989), 15.

<sup>82</sup> Ibid., 15.

<sup>83</sup> Aleksandr A. Svechin, *Strategy* (Minnesota: East View Publications, 1991), 123-124.

<sup>84</sup> Department of the Army, *FM 525-5: Force XXI Operations*, 2-8.

<sup>85</sup> Ibid., 2-8.

<sup>86</sup> Ibid., 2-8.

<sup>87</sup> Department of the Army, *FM 100-5: Operations*, 2-1.

<sup>88</sup> Ibid., 2-1.

<sup>89</sup> Richard J. Newman, "Warfare 2020," *U. S. News and World Report* (5 August 1996): 34-35.

<sup>90</sup> Department of the Army, *FM 7-98: Operations in a Low-Intensity Conflict*, (Washington, D. C.: Government Printing Office, 1992), 2-1.

<sup>91</sup> Ibid., 2-5.

<sup>92</sup> Ibid., 1-1.

<sup>93</sup> Department of the Army, *FM 7-20: Infantry Rifle Battalion*, C23 & 3-18 - 3-23.

---

<sup>94</sup> Department of the Army, *FM 100-19: Domestic Support Operations*, (Washington D. C.: Government Printing Office, 1993), viii.

<sup>95</sup> Ibid., 1-4 - 1-5.

<sup>96</sup> Ibid., 5-4.

<sup>97</sup> Ibid., 5-4.

<sup>98</sup> Department of the Army, "Motorized Experience of the 9th Infantry Division," (Fort Lewis, Washington: Government Printing Office, 1989),

<sup>99</sup> Ibid., 16-17.

<sup>100</sup> Ibid., Figure 6.

<sup>101</sup> Ibid., 107.

<sup>102</sup> Ibid., 108.

<sup>103</sup> Test and Evaluation Coordination Office, Directorate of Combat Developments, "Evaluation Plan (EP) for the Light Motorized Infantry Battalion and Light Attack Battalion," (Fort Benning, Georgia: U. S. Infantry Board, 1983), 12.

<sup>104</sup> Army Development and Employment Agency, "Operational Concepts for Units in an Infantry Division (Motorized)," (Fort Lewis, Washington, 1985), 16.

<sup>105</sup> Ibid., 16.

<sup>106</sup> Ibid., 16.

<sup>107</sup> Test and Evaluation Coordination Office, Directorate of Combat Developments, "Evaluation Plan (EP) for the light Motorized Infantry Battalion and Light Attack Battalion," 3-2.

<sup>108</sup> Ibid., 3-1 - 3-2.

<sup>109</sup> Department of the Army, "Motorized Experience of the 9th Infantry Division," 36.

<sup>110</sup> Ibid., 37.

<sup>111</sup> Ibid., 44-45.

---

<sup>112</sup> Michael E. Petersen, *The Combined Action Platoons: The U. S. Marines Other War in Vietnam* (New York: Praeger Publishers, 1989), 22.

<sup>113</sup> Ibid., 22.

<sup>114</sup> Ibid., 23.

<sup>115</sup> Ibid., 134.

<sup>116</sup> Ibid., 88.

<sup>117</sup> Ibid., 25.

## APPENDIX 2: Bibliography

### Books

- Bacevich, A. J. *The Pentomic Era: The U. S. Army Between Korea and Vietnam*. Washington, D. C: National Defense University Press, 1986.
- Bellamy, Chris. *The Future of Land Warfare*. New York: St. Martin's Press, 1987.
- Clausewitz, Carl Von. *On War*. New Jersey: Princeton University Press, 1984.
- English, John A. *On Infantry*. New York: Praeger Special Studies, 1981.
- Farrar-Hockley, Anthony. *Infantry Tactics: 1939-1945*. London: Almark Publishing Company, Ltd., 1976.
- Fletcher, Ian. *Fields of Fire: Battlefields of the Peninsular War*. New York: Sarpedon, 1994.
- Gates, David. *Light Divisions in Europe: Forces of the Future*. London: Alliance Publishers Ltd., 1989.
- Grant, Michael. *The Army of the Ceasars*. New York: Charles Scribner's Sons, 1974.
- Griffith, Paddy. *Forward Into Battle: Fighting Tactics from Waterloo to the Near Future*. England: The Crowood Press, 1981.
- Hart, Liddell. *The Future of Infantry*. Harrisburg, Pennsylvania: Military Service Publishing Co., 1936.
- Mazaar, Michael J. *Light Forces and the Future of U. S. Military Strategy*. Washington: Brassey's (US), Inc., 1990.
- Marshall, S. L. A. *Men Against Fire: The Problem of Battle Command in Future War*. Peter Smith, Gloucester, MA., 1978.
- Menning, Bruce W. *Bayonets Before Bullets: The Imperial Russian Army, 1861-1914*. Indiana: Indiana University Press, 1992.
- Petersen, Michael E. *The Combined Action Platoons: The U. S. Marines' Other War in Vietnam*. New York: Praeger Publishers, 1989.
- Sledge, E. B. *With the Old Breed: At Peleliu and Okinawa*. New York: Oxford University Press, 1981.

Svechin, Aleksandr A. *Strategy*. Minnesota: East View Publications, 1991.

Tzu, Sun. *The Art of War*. London: Oxford University Press, 1981.

Warden, John A. *The Air Campaign: Planning for Combat*. Washington, D. C.: National Defense University Press, 1988.

Wickham, John A. *Light Infantry Divisions: White Paper*. Washington, DC: Department of the Army, 1984.

### **Periodicals**

Dessert, Rolland A. "Mobile Strike Force: an Experiment in Future Battle Command." *Military Review* (July-August 1996): 34-39.

Maggart, Lon E. and Rigby, Randall L. "Shaping Battlespace: More Than Just a Deep Attack." *Field Artillery* (November-December 1995): 12-14.

Naylor, Sean. "Defense Trends - Force XXI: Focus Needed on Training NCOs." *Army Times* (February 19, 1996): 24.

Newman, Richard J. "Warfare 2020." *U. S. News and World Report* (August 5, 1996): 34-42.

Palmer, James and Charles Rash. "Operation Hurricane Andrew Relief: Humanitarian Assistance, Redleg Style." *Field Artillery* (October 1993): 31-35.

Schneider, James J. "The Theory of the Empty Battlefield." *Journal of the Royal United Services Institute for Defence Studies* (1987): 37-44.

Wass de Czege, Huba. "Mobile Strike Force: A 2010 Potential Force". *Military Review* (July-August 1996): 70-84.

### **Government Documents**

US Army. *ARTEP 7-8-MTP: Mission Training Plan for the Infantry Rifle Platoon and Squad*. Washington: Department of the Army, 1994.

US Army. *FM 7-8: Infantry Rifle Platoon and Squad*. Washington: Department of the Army, 1992.

US Army. *FM 7-10: The Infantry Rifle Company*. Washington: Department of the Army, 1990.

US Army. *FM 7-20: The Infantry Battalion*. Washington: Department of the Army, 1992.

- US Army. *FM 7-98: Operations in a Low-Intensity Conflict*. Washington: Department of the Army, 1992.
- US Army. *FM 90-4: Airmobile Operations*. Washington: Department of the Army, 1980.
- US Army. *FM 100-5: Operations*. Washington: Department of the Army, 1992.
- US Army. *FM 100-17-1: Army Pre-Positioned Afloat Operations*. Washington: Department of the Army, 1996.
- US Army. *FM 100-19: Domestic Support Operations*. Washington: Department of the Army, 1993.
- US Army. *FC 90-1: Night Operations*. Fort Leavenworth, KS: Combined Arms Combat Development Activity, 1985.
- US Army. *FC 1-111: Combat Aviation Brigade*. Washington: Department of the Army, March 1985.
- US Army. *FC 1-112: Attack Helicopter Battalion*. Washington: Department of the Army, March 1985.
- US Army. *ST 71-3: Tactics, Techniques, and Procedures for the Digitized Brigade*. US Army Armor Center, Fort Knox, KY, February 1995.
- US Army. *ST 71-100-2010: Principles, Tactics, Techniques, and Procedures for the 2010 Digitized Force at Division Level*. Fort Leavenworth, KS, 1995.
- US Army. *TRADOC Pamphlet 525-5: Force XXI Operations*. Washington: Department of the Army, August 1994.
- US Army. *TOE Handbook 07015L-CTH: Commander's TOE Handbook - Infantry Battalion (Light)*. Washington, D.C., October 1990.

## Reports

- Army Development and Employment Agency. "Operational Concepts for Units in an Infantry Division (Motorized)." ADEA: Fort Lewis, WA, 1985.
- Cavezza, Carmen. "Infantry 2000: The Force That Leads the Way." United States Army Infantry School, Fort Benning, Ga., October, 1991.
- Center for Army Lessons Learned. "Operation Restore Hope - Lessons Learned Report." U. S. Army Combined Arms Command, Fort Leavenworth, KS, 1995.

Center for Army Lessons Learned. "Operation Uphold Democracy - Initial Impressions." U. S. Army Combined Arms Command, Fort Leavenworth, KS, 1996.

Department of the Army. "Motorized Experience of the 9th Infantry Division." Headquarters, 9th Infantry Division, Fort Lewis, Washington, 1989.

Headquarters, United States European Command. "Operation Provide Comfort - After Action Report." Washington, D.C., 1992.

Reimer, Dennis J. "Force of Decision . . . Capabilities for the 21st Century." Department of the Army, Washington, D. C. 1996.

Test and Evaluation Coordination Office, Directorate of Combat Developments. "Evaluation Plan (EP) for the Light Motorized Infantry Battalion and Light Attack Battalion." US Army Infantry Board, Fort Benning, Ga, 1983.

### **Thesis/Monographs/Papers**

Davis, Danny M. "Infantry Attacks: Operating Principles for the Offensive Employment of Modern Light Infantry Units." US Army Command and General Staff College, 1989.

McMichael, Scott R. "A Historical Perspective on Light Infantry." Combat Studies Institute, US Army Command and General Staff College, 1987.

Miller, Ward A. "The Ninth Australian Division Versus the Africa Corps: An Infantry Division Against Tanks - Tobruk, Libya, 1941." U.S. Army Command and General Staff College, Fort Leavenworth, KS, 1986.

Pickar, Charles K. "Blitzkrieg: Operational Art or Tactical Craft?" US Army Command and General Staff College, 1992.

Schneider, James J. "Theoretical Paper No. 3: The Theory of Operational Art." US Army Command and General Staff College, 1988.

Sikes, James E. "The Air Dimension and the Heavy Dimension: The Utility of an Organic Light Infantry Air Assault Battalion in the Heavy Division." US Army Command and General Staff College, 1987.

Wass de Czege, Huba. "NATO Interim Report: Employment Concepts for Light Infantry in Europe." School of Advanced Military Studies, US Army Command and General Staff College, 1988.

## **Speeches**

Howard, Michael. Chesney Memorial Gold Medal Lecture, October 1973.

Wass de Czege, Huba. Command and General Staff College, Fort Leavenworth, Kansas,  
3 January 1996.